Reformulation

Consumers can make healthy food choices when they are given a variety of foods to buy. Since much of the foods we eat are processed, the food and drink industry make great efforts (by offering increased choice) to enable consumers to choose foods that suit their individual tastes and health needs. The results of these efforts are new, fortified and reformulated products in a wide variety of serving sizes and flavours that make it easier for people to make healthy dietary choices. From a health perspective, reformulation involves changing the nutrient content of a processed food product to either reduce the content of ‘negative’ nutrients such as sodium, saturated fat, trans-fat, or to increase the content of beneficial nutrients such as dietary fibre, whole grains and unsaturated fats.

Why Reformulation?

Food manufacturers often reformulate their products in response to changes in the prices of raw ingredients, availability of usual supplies, to add new flavours to their product line, or due to Government or consumer demands for reduced sugar, salt or fat. Many people (often unjustly) view some ingredients as ‘unnatural’ – such as colours, flavours and preservatives - so alternatives perceived to be more natural by consumers can also lead food companies to reformulate products. The way that all these factors overlap (such as products that promote health and well-being with low sugar, fat and salt levels) can result in major challenges to companies. Reformulating with entirely different ingredients while still maintaining product taste, texture, appearance, safety and shelf life (all while keeping costs and prices competitive) can be a major task.

However, using existing scientific knowledge and technological expertise, it is possible to meet the tastes and needs of consumers and produce safe, tasty and nutritious foods. Reformulating and creating new products is time intensive and costly (it may cost in excess of €1 million to reformulate an individual product) but in some cases could provide a good opportunity to improve the health of a population by improving the nutritional characteristics of processed foods that are commonly consumed.

The Roles of Fats, Sugar and Salt in Food

Even very small changes in formulations can lead to unexpected safety and stability problems, a good example being changing the levels or types of fats, sugars or salt used. These substances contribute to foods in many ways and reducing their amounts may alter
the food structure or lead to food safety issues. Fats are carriers of taste and some vitamins (A, D, E and K are fat soluble), contributing to texture, mouth sensation and consistency. Fats can be replaced with carbohydrate substitutes that have similar properties or through the use of other technologies. Sugar contributes to food taste and texture and many sugar substitutes do not have the same qualities. Salt (sodium chloride) is not only responsible for taste in many foods, but also contributes to food preservation by reducing the water available that allows bacteria to grow.

**Effectiveness of Reformulation in Improving Population Health**

The role of sodium in the development of high blood pressure and stroke is well established and evidence exists linking the intake of dietary saturated fat to unhealthy cholesterol levels. According to IUNA 2011, daily intakes of salt in Ireland exceed the Food Safety Authority Ireland (FSAI) target intake of 6g/day. The majority of the sodium we get in our diet in Ireland (65-70%) comes from processed foods such as bread, processed meats and cheese. Very little sodium comes into our diets from salt used in cooking or added at the table. Among 18-64 year olds, fat provides ~37% of food energy on average, which exceeds the generally recommended upper limit of 35%.

Processed foods account for a very large portion of our total food sales and achieving improvements in diet at a population level is of huge concern for public health professionals and health departments. So reformulation of foods that are commonly eaten makes sense. Reformulating processed foods is a complex process and only a collaborative approach between government, industry, public health experts and researchers will solve the challenges related to improving the nutritional characteristics of processed foods. The FSAI Salt Reduction Programme has resulted in huge decreases in the salt levels of foods such as white bread, canned and dried soups, and breakfast cereals. Salt reduction schemes such as this show that collaboration between industry and health experts can work effectively to benefit us all.

There is a lot of information to show the health and economic benefits of reducing sodium intake. A US study estimated that food reformulation aimed at reducing salt would achieve the same population wide heart health benefits as those achieved by a 5% reduction in BMI (Body Mass Index). Healthcare savings would potentially be as high as $24 billion per year.

**Successful Reformulation**

Evidence shows that preferences for dietary salt can be changed and lowered over time so small and gradual changes are required in order for reformulation of foods to be successful. This can be achieved through small reductions in salt levels over time. Changing the levels of other nutrients such as sugar, saturated fat or fibre can also be achieved with the same gradual process.
References


